



*Date of Application, 10th June, 1904—Accepted, 28th July, 1904*

### COMPLETE SPECIFICATION.

#### **Improved Device for Retaining a Set of Artificial Teeth in Position by Atmospheric Pressure and Method of Making the same.**

I, CARL RAUHE, of 4 Koenigsallee, Düsseldorf, Germany. Dentist, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 My invention relates to an improved device for retaining a set of artificial teeth in position by atmospheric pressure and method of making the same. In similar devices, which are in use at present, there is produced by means of a matrix applied on the plaster cast model of the jaw in the manufacture of the india rubber plate a cavity between the roof of the mouth and the denture, the said  
10 cavity acting either as a suction port itself or being filled by a soft india rubber disk secured to the set of teeth, by means of rivets or screws which materially increases the suction power. This india rubber disk gets, however, spongy in the mouth and therefore must be replaced by a new one from time to time, a task requiring the service of a dentist because it is usually too difficult for the patient  
15 to fix himself the rivet and plate or screw and plate fixtures. Another drawback is that the plate or rivet or screw being never specially fitted to accommodate itself to the shape of the jaw, often causes the feeling of a disagreeable pressure on the respective spot.

The object of my invention is to remove the disadvantages set forth and the  
20 device together with the tin matrix employed in my contrivance is illustrated in the accompanying drawings by Figures 1, to 10.

The said matrix consists of three parts *a*, *b*, *c*, illustrated by Figs. 1, 2, 3, which is put together as shown by Fig. 4, and is pressed by means of a suitable tool to the spot of the gypsoplast of the jaw where it is intended to place the  
25 suction device. Tin being a soft material will easily accomodate itself to the shape of the plaster cast, it may, however, be as well replaced by any other suitable material.

I now take apart the matrix and secure by means of pins or plugs *d* the part *a* to the plaster cast, to the shape of which it accommodates. Leaving the part *c*  
30 aside, I now insert the part *b* again into the part *a* and fill the set of artificial teeth as usually with caoutchouc including the portion which has been occupied by the part *c*. After vulcanization I remove the matrix and there remains now on the side of the palate an annular recess *e* with a button or knob *f* in the centre corresponding to the shape of the said portion *c*. The removal of the said  
35 matrix I accomplish by taking off the portion *a* and cutting through the part *b*. The latter may, however, be composed of several sup-parts which may be easily drawn out from under the india rubber button. I now draw the soft india rubber disk illustrated by Fig's. 5, and 6, over the hard rubber button and substitute the disk by a new one. This operation may be easily performed by  
40 the patient himself without requiring the aid of a dentist.

The knob or button may also be made of gold or any other suitable metal in the shape of a disk with a small rod or plug (see Fig. 8). In this case the part *c* may be omitted from beginning and a button plate *h* with a small plug, may be inserted in the matrix so that a button is produced as shown in Fig. 10. The  
45 knob of the india rubber button may be given any size by correspondingly chang-



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*Rauhe's Improved Device for Retaining a Set of Artificial Teeth in Position.*

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ing or adjusting the matrix. The neck of the india rubber button may be made somewhat thicker than the size of the hole in the rubber disk so that the soft india rubber will press against the hard india rubber assuming the shape of a cornet which favors more or less suction. The button may as well be screwed to or otherwise secured to the set. 5

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. The device for retaining a set of artificial teeth in position by atmospheric pressure, of which the characteristic is a button of india rubber, metal or any other suitable material, which is secured to the said denture, in combination with a soft india rubber disk which can be drawn over the said button, substantially as herein described and illustrated in the accompanying drawings. 10

2. An art of manufacturing a device for retaining a set of artificial teeth in position by atmospheric pressure, the characteristic being the pressure upon the gypsumplast of a matrix provided with a detachable central portion in order to form a corresponding button in one piece with the said suction plate after the removal of the said portion when shaping the suction plate, by filling the aperture or space which had been occupied by the said removable portion, substantially as herein described. 15 20

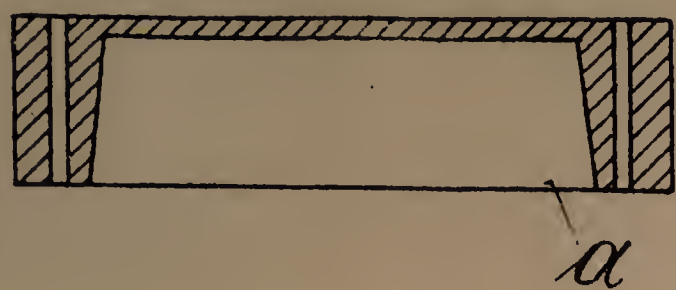
Dated this 10th day of June, 1904.

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*Fig. 1.*



*Fig. 2.*



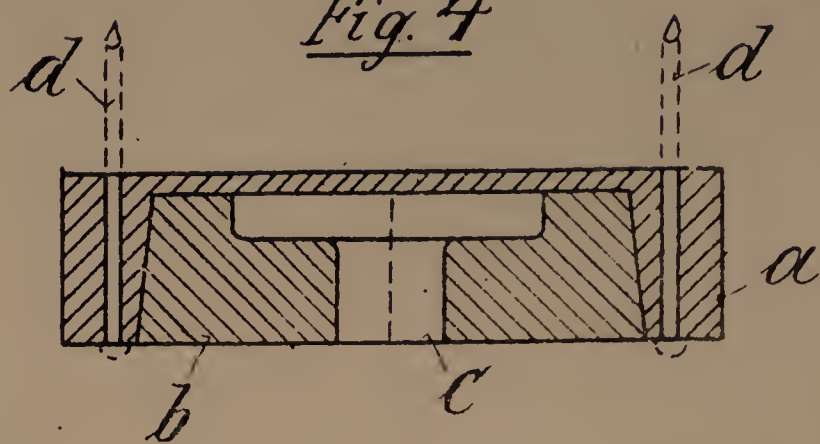
*Fig. 3.*



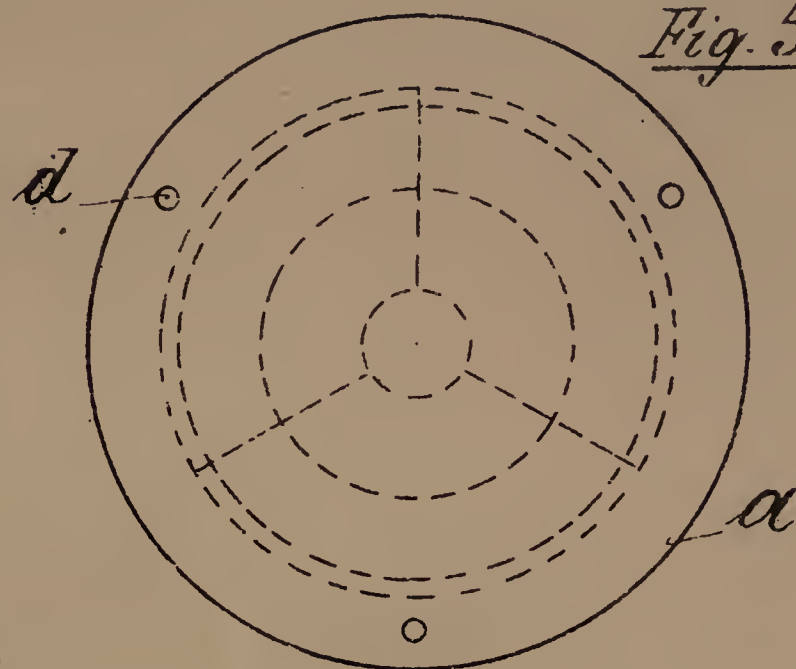
*Fig. 8.*



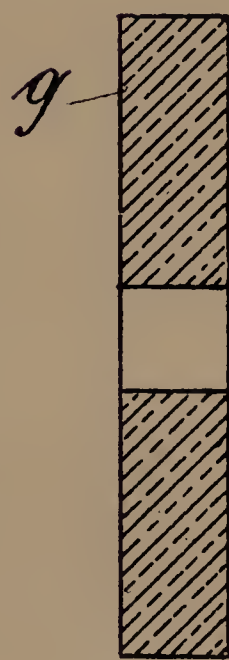
*Fig. 4.*



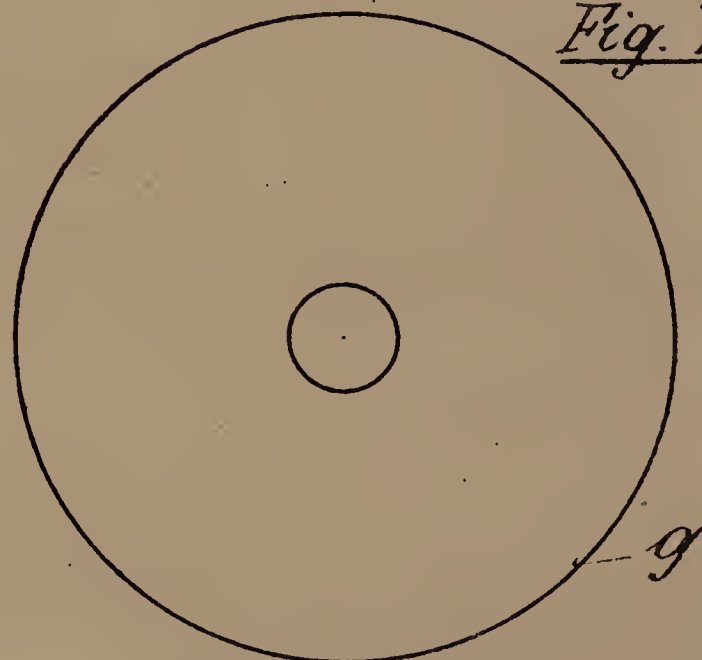
*Fig. 5.*



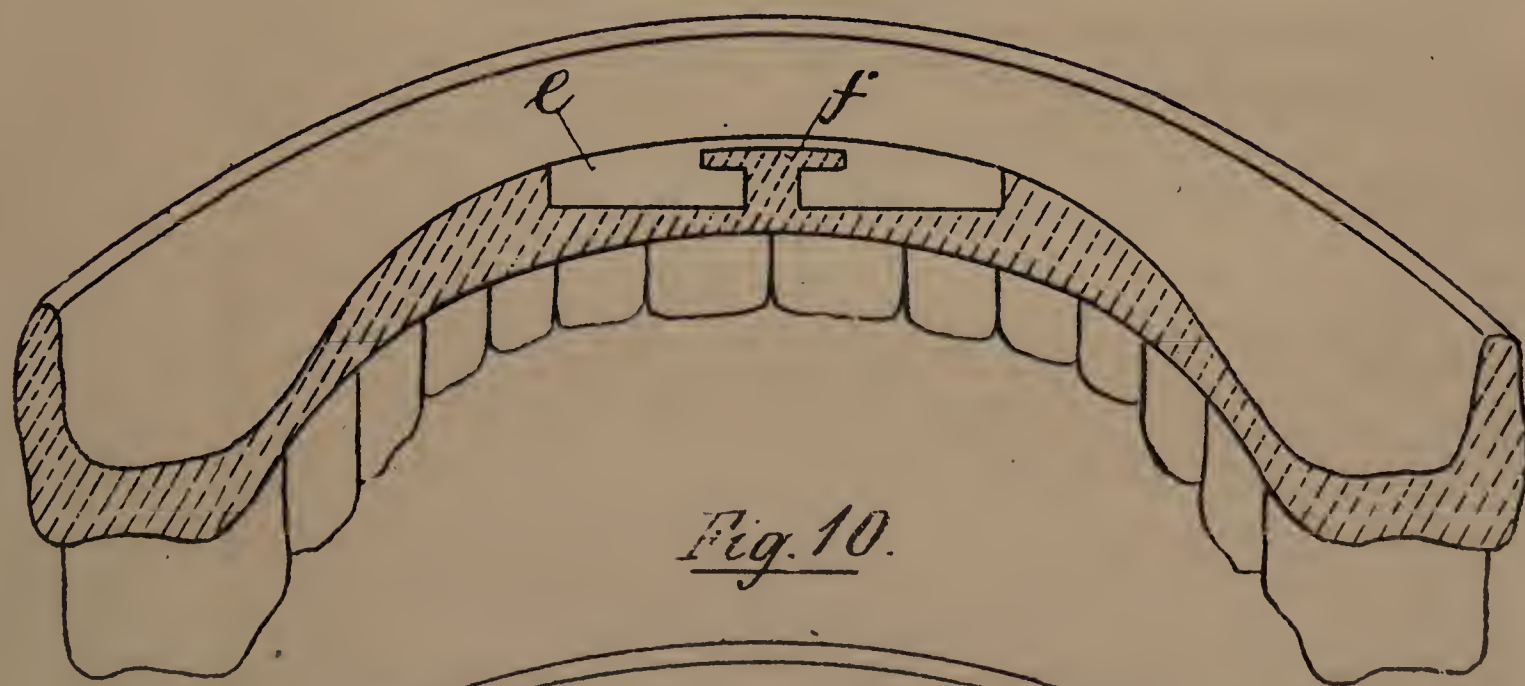
*Fig. 6.*



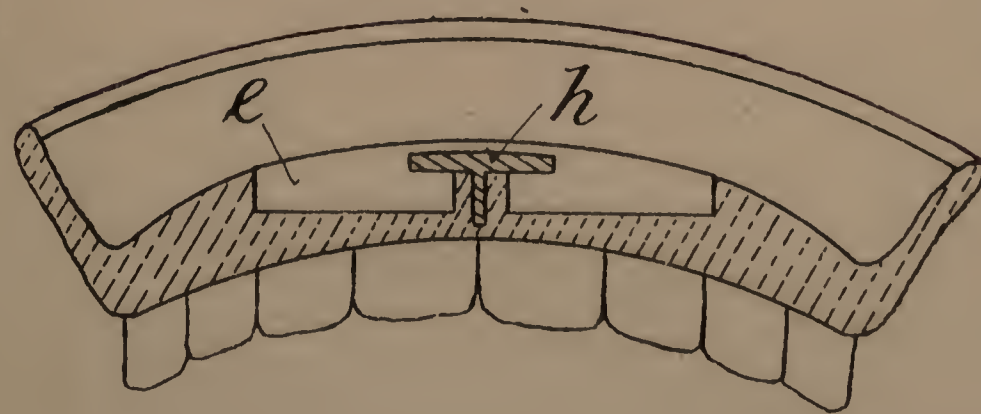
*Fig. 7.*



*Fig. 9.*



*Fig. 10.*



[This Drawing is a reproduction of the Original on a reduced scale.]



